

ENTOMOLOGY

Molasses in Insecticide

► **HOUSEFLIES SWARM** to a new-type insecticide as if it were molasses. And for a good reason: it is molasses, but with a generous helping of TEPP, sodium fluoroacetate, sodium arsenate or sodium arsenite added.

These chemical baits, using blackstrap molasses or brewers' malt along with very potent poisons, are being developed to control DDT-resistant flies, J. B. Gahan of the Bureau of Entomology and Plant Quarantine told the American Association of Economic Entomologists meeting in Philadelphia.

Houseflies that infected dairies in the Orlando, Fla., region had become so resistant to the DDT family of insecticides, which are chlorinated hydrocarbons, that their control was almost impossible. To fight the flies, U. S. Department of Agricul-

ture entomologists began experiments with the chemical baits.

Mixtures of blackstrap molasses or brewers' malt with highly toxic poisons that were not of the DDT group were placed in open pans on dairy floors, with wire covers to keep stock from eating the poison.

In the first 24 hours, the pan baits gave 49% to 88% control over the flies. Three weeks later, more than 90% of the flies had been killed in all the experimental dairies.

Although chemical baits appear highly promising in controlling houseflies, Mr. Gahan warned that they are not ready for general use yet. All the toxic ingredients used are highly poisonous to man and animals, he said, and further work must be done to make them safer before they can be widely applied.

Science News Letter, January 24, 1953

TECHNOLOGY

Coat Metals in Vacuum

► **THE PROCESS** of plating metals and plastics by vacuum metallizing is finding increasing favor in commercial circles as manufacturers seek to cut consumption of critical metals.

The National Research Corporation, Cambridge, Mass., reports that although the vacuum technique is comparatively new, it is "catching on" quickly because of the economies it offers.

Brilliant metallic finishes can be deposited on objects through vacuum techniques, yet little coating metal is required. With many metals now needed for defense equipment, such metal savings are highly attractive to industrialists.

Objects to be coated are put in a chamber that can be evacuated. Coating metal is put on filaments arranged in the chamber.

The chamber is evacuated and the filaments are heated electrically to incandescence.

The hot coating metal boils off in vapor form and condenses on the article to be coated, producing a bright finish of microscopic thickness. In some cases, the gleaming finishes are so bright they do not even have to be buffed.

Aluminum, silver, gold, copper, zinc, chromium, cobalt, nickel, selenium and many other metals and metallic compounds serve satisfactorily as coating materials.

The process is especially good in the making of automotive and consumer appliance hardware, handtools, light fixtures, reflectors, decorative medallions, jewelry and toys.

Science News Letter, January 24, 1953

ARCHAEOLOGY

Rescue FFV Relics

► **BEFORE THE** waters of the recently completed John H. Kerr Reservoir flooded over the land along the Roanoke River in southern Virginia, scientists were able to rescue evidences of the very "First Families of Virginia" who lived and hunted there some 7,000 years ago.

The finds were the curiously shaped fluted points that archaeologists know as the eastern type Folsom. They were hurled at game by a throwing stick, or atlatl, which was longer-shafted than an arrow but not so long as a spear. The points are very similar to those found in the West in close association with extinct animals.

These first Virginians probably came in an early migration down the eastern side

of the Rockies and then across country to the Roanoke. The new migrants probably followed in the pathways of migrating buffalo which provided their food.

Unfortunately, no camp sites of these people have been found that could be dated with the accurate carbon-dating method. Neither have any of the bones of these people been located.

Other weapons were found that were left by people who occupied the area in later times. A small diamond-shaped point known as the Sandia point is believed to be about 3,500 to 5,000 years old. And a long willow-leaf-shaped point, the Manzano point, was probably used to shoot down game some 2,000 years ago.

The work of digging out these ancient remains was done by Carl F. Miller, of the Smithsonian Institution, which is cooperating with the Corps of Engineers and the National Park Service in salvaging archaeological remains in areas to be flooded.

Science News Letter, January 24, 1953

Generally speaking, an *automobile engine* uses 9,000 cubic feet of air to one cubic foot of gasoline.

Additional floor space equal to a one-story building, 52 feet wide, extending from New York to San Francisco is needed to house the nation's public elementary and secondary *school population* adequately.

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